Amendments to the Claims

1. (Currently amended) A method of producing a bioactive human coagulation factor VIII, comprising:

a) subcloning a coding sequence comprised by ATCC accession number 39,812 encoding full length human coagulation factor VIII into a plant expression vector and obtaining a subcloned plant expression vector;

b) transferring the subcloned plant expression vector into a plurality of plant cells;

c) selecting a plurality of positive transformants from the plurality of plant cells on an antibiotic selective media;

d) growing the plurality of plant cells in whole plants or suspensions; and

e) extracting and purifying the full length human coagulation factor VIII from the plurality of plant cells.

2. (Original) The method as recited in claim 1, wherein transferring is by direct particle bombardment.

3. (Previously presented) The method as recited in claim 1, wherein transferring is by *Agrobacterium* mediated transformation.

4. (Original) The method as recited in claim 1, wherein transferring is by pollen transformation.

5. (Previously presented) The method as recited in claim 3, wherein *Agrobacterium* mediated transformation comprises the steps of:

a) introducing said plant expression vector into *Agrobacterium*;

b) co-cultivating the *Agrobacterium* containing the subcloned plant expression vector with the plurality of plant cells.

6. (Currently amended) A method of producing an active human coagulation factor VIII from plant cells, comprising the steps of:

a) introducing a coding polynucleotide sequence comprised by ATCC accession number 39,812 encoding full length human coagulation factor VIII into a plant expression vector;

b) transforming plant cells with said plant expression vector;

c) cultivating said transformed cells; and

d) obtaining the full length human coagulation factor VIII.

7. (Previously presented) The method as recited in claim 6, wherein said polynucleotide sequence is a cDNA.

8. (Previously presented) The method as recited in claim 6, wherein factor VIII is cultivated in a whole plant.

9. (Previously presented) The method as recited in claim 6, wherein factor VIII is cultivated in a plant tissue culture.

10. (Previously presented) The method as recited in claim 6, wherein factor VIII is extracted and purified by a process selected from the group consisting of protein precipitation, ultrafiltration, affinity chromatography, and electrophoresis.

Claims 11-17. (Cancelled).

18. (Previously presented) The method as recited in claim 6, further comprising, prior to introducing the coding polynucleotide sequence linking a regulatory element to the coding polynucleotide sequence, the regulatory element being selected from the group consisting of leader sequences, signal peptides, transcription promoters or enhancers, and transcription terminators.

19. (Previously presented) The method as recited in claim 6, wherein said coding sequence is provided by adding transcription promoter to the upstream of 5' end of the coding sequence; and adding a transcription terminator to the downstream of 3' end of the coding sequence.

20. (Previously presented) The method as recited in claim 19, further comprising adding a sequence encoding a signal peptide between the transcription promoter and the upstream 5' end of the encoding sequence.

21. (Original) The method as recited in claim 20, further comprising adding a regulatory element encoding an untranslated leader sequence between the transcription promoter and the additional regulatory element encoding the signal peptide to enhance mRNA stability.

22. (Original) The method as recited in claim 20, further comprising adding a regulatory element encoding an untranslated leader sequence at the downstream or 3' end of the encoding sequence to enhance mRNA stability.

23-31. (Cancelled).